

REMARKS

Claims 1-27 are pending in the present application. In the Office Action mailed December 4, 2003, the Examiner rejected claims 18-22, 26 and 27 under 35 U.S.C. §112, second paragraph, claims 1-7, 16-23, 26 and 27 under 35 U.S.C. §102(b), claims 12-15, 24 and 25 under 35 U.S.C. §103(a).

35 U.S.C. §112, second paragraph Rejection

With respect to claim 18, Applicants respectfully disagree with the Examiner's characterization of the claim. Specifically, Applicants refer to FIG. 14 and the corresponding details in the specification paragraphs [1151] to [1158]. FIG. 14 clearly illustrates state storage 1204. The claims language is consistent with and supported by the originally filed drawings and specification.

35 U.S.C. §102(b) Rejections

Applicants present hereinabove amendments to claims 1, 6 and 16 to further clarify Applicants' claimed invention. With respect to claim 23, Applicants respectfully disagree with the Examiner's characterization of Kato and Levine. Specifically, neither reference teaches a lookahead state generator capable of determining a future state of the encoder. The use of a lookahead state generator as recited in the claims is used to increase the encoding speed. By using known relationships, the encoder is able to determine future states of the encoder and use this information to generate output encoded values. Please refer to Applicants' originally filed specification, paragraph 1158, and FIGs. 11 and 14, where the state relationships are detailed. The lookahead state generator is able to determine future states of the encoder, and use those states to generate an output. Such output does not need to wait for the encoder to actually generate the state, but rather, the relationships of the states in the encoder are designed in such a way as to enable exploitation for time savings.

Kato merely teaches a prediction circuit, wherein the prediction circuit generates an estimate P_i . As stated in Kato, col. 6, lines 61 -68, Kato determines an estimate (prediction value) P_i for actual input data D_i (an unsigned integer). Specifically, "[t]he estimate P_i is

subtracted from the actual input data D_i , thereby calculating an estimation error (prediction error) S_i ." In contrast to Applicants' claimed invention, the value P_i is an estimate of D_i , and is used to make a correction between P_i and D_i . The estimate P_i is not a generated by a lookahead state generator.

Further Kato does not teach generation of a plurality of state values during one system clock cycle. Rather Kato teaches generation of an estimate P_i for each input of data D_i , which is serially input. See Kato, FIG. 1(a). Therefore, Kato does not anticipate claim 23, or those depending thereon, as Kato does not teach each and every limitation of the claim.

Levin teaches a method much like that of Kato, as detailed in Levine, col. 4, lines 43-51. The estimate value of Levine is not a lookahead state generated by a lookahead state generator. See arguments above. Additionally, Levine does not teach generation of a plurality of state values during one system clock cycle. Rather Levine teaches generation of a predicted value of a next sample where the samples are input serially. See Levine, FIG. 1. Therefore, Levine does not anticipate claim 23, or those depending thereon, as Levine does not teach each and every limitation of the claim.

35 U.S.C. §103 Rejections

Applicants have amended claim 12 to clarify Applicants' claimed invention. With respect to claims 24 and 25, the arguments provided hereinabove are also applicable.

In light of the arguments and amendments presented hereinabove, Applicants respectfully request withdrawal of all pending claims.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application is earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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